

XP-002512706

WPI / Thomson

AN - 2003-436844 [41]
 AP - KR20010041113 20010710; [Previous Publ KR20030005710 A 00000000]
 CPY - KOCH-N; KOCH-N
 DC - A17 E36
 - F32
 DW - 200341; 200517
 IC - C08L23/06; A61F2/30; C08K3/04; C08K7/00
 IN - AHN J U; AHN J W; JOO Y S; JU Y S; LIM D S
 LNKA- 2003-115542
 MC - A04-G02B A08-R03 A08-S02 A11-B01 E31-N04D
 PA - (KOCH-N) KOREA CHOONGANG EDUCATIONAL FOUND
 - (KOCH-N) KOREA CHUNGANG EDUCATIONAL FOUND
 PN - KR20030005710 A 20030123 DW200341
 KR100454587B B 20041103 DW200517
 PR - KR20010041113 20010710
 XIC - C08L-023/06; A61F-002/30; C08K-003/04; C08K-007/00; C08L-023/00
 AB - NOVELTY :

A ultra high-molecular weight polyethylene (UHMWPE) containing carbon nano-tube(CNT) is provided to enhance wear-resistance of the polyethylene by dispersing the polyethylene and CNT in a solvent, then molding the obtained powder after vaporizing the solvent.

- DETAILED DESCRIPTION :

The UHMWPE containing CNT comprises 0.1 to 0.5 weight parts of CNT based on 100 weight parts of the UHMWPE. The UHMWPE is produced by a process comprising steps of entering the powdery UHMWPE in toluene solvent and dispersing it for 0.5-1 hour by way of ultrasonic treatment; adding 0.1 to 0.5 weight parts of CNT into the dispersed polyethylene based on 100 weight parts of the UHMWPE and dispersing again it for 0.5-1 hour by way of the ultrasonic treatment, then naturally vaporizing the solvent in a hood; and forming the obtained powdery mixture in a mold at 150-200 [deg]C and the pressure of 20-30MPa for 1-2 hours.

ICAI- C08L23/06

ICCI- C08L23/00

INW - AHN J U; AHN J W; JOO Y S; JU Y S; LIM D S

IW - ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE ADD CARBON NANO TUBE PREPARATION

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NC - 1

NPN - 2

OPD - 2001-07-10

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PD - 2003-01-23

TI - Ultra high molecular weight polyethylene added with carbon nano-tubes and its preparation